In the Specification:

Please replace the paragraph beginning at page 7, line 2, with the following:

A1

--Figure 1. Amino acid alignment of the deduced amino acid sequence of the KCNQ5 splice variants KCNQ5-1 (SEQ ID NO:4) and KCNQ5-2 (SEQ ID NO:5). Identical residues are shaded and amino acid positions are given at the left margin.--

Please replace the paragraph beginning at page 7, line 5, with the following:

A2

--Figure 2. Amino acid alignment of KCNQ5 (SEQ ID NO:4) with human KCNQ2 (SEQ ID NO:14) (Charlier *et al., Nat. Genet.* 18:53-55 (1988) and KCNQ4 (SEQ ID NO:15) (Kubisch *et al., Cell* 96:437-446 (1999)). Identical residues are shaded and numbers at the left margin indicate amino acid position.--

Please replace the paragraph beginning at page 58, line 28, with the following:

A3

--A 1.15 kb clone from the middle of KCNQ5 was amplified from human brain cDNA. The sense primer was (1) 5'-CCACGTCTGCACTCAGGAAGTCTCCG (SEQ ID NO:6) and the antisense primer was (2) 5'-CCAGCTTGGATTCTATGGACTGTACC (SEQ ID NO:7). The complete 3' end of KCNQ5 was amplified by standard 3' RACE PCR techniques from human brain cDNA in two successive rounds. In the first round the gene specific primer used was (3) 5'-GAAGAGCCGAGAGAAAATAACAGCAG (SEQ ID NO:8). This reaction was reamplified with the gene-specific oligo (4) 5'-GCCCTGTGGATAGCAAAGATCTTTCG (SEQ ID NO:9) to obtain a 1.2 kb fragment that contained the entire 3' region of the KCNQ5 mRNA.--

Please replace the paragraph beginning at page 59, line 3, with the following:

A4

--The 5' end of KCNQ5 was amplified from human brain cDNA using 2 nested rounds of a standard 5' RACE PCR. The gene specific oligos used in the first and second amplifications were (5) 5'-GCTGTGAGCATAAACCACTGAACCC (SEQ ID NO:10) and (6) 5'-CCATGCGCACCATGCGGAGGATCTG (SEQ ID NO:11), respectively. A 650 bp fragment containing the missing 5' end of the KCNQ5 coding region was isolated from the second reaction.--

Please replace the paragraph beginning at page 59, line 8, with the following:

A5

--The entire coding region of KCNQ5 was then isolated in a single fragment using oligonucleotides overlapping the KCNQ5 coding sequence ends as determined from sequence analysis of the above fragments. The oligonucleotides were (7) 5'-CTCTGAATTCCAC**CATGAAGGATGTGGAGTCGGG** (SEQ ID NO:16) (sense) and (8) 5'-AATGTCTAGAA**TGGCTAAAGAACTGCTATGCCTGG** (SEQ ID NO:17) (antisense). The first oligonucleotide includes the initiator methionine and first 20 coding nucleotides of the KCNQ5 gene. Upstream are an EcoRI restriction enzyme site for subcloning into plasmid vectors and a Kozak consensus sequence to boost translation. All nucleotides corresponding to KCNQ5 are in bold type. The second oligonucleotide is from the 3' untranslated sequence of KCNQ5 and includes an Xba1 restriction site for subcloning. Non-KCNQ5 sequences at the 5' end of each primer were included for expression vector construction, but these sequences are not necessary for the amplification of the KCNQ5 gene. Only those sequences shown in bold type, which are from KCNQ5 itself, are needed to amplify KCNQ5 when using these particular primers. The preferred template for the amplification is first strand cDNA made from some part of the human brain, or whole brain. Whole human brain cDNA was used for this reaction.--

Please cancel the present informal "SEQUENCE LISTING", pages 61-64, and insert therefor the accompanying paper copy of the Sequence Listing, page numbers 1 to 14, at the end of the application. Cance the page numbers of the Claims and Abstract and renumber as pages 61-66, accordingly.

REMARKS

In accordance with 37 C.F.R. §§1.821 to 1.825, Applicants request entry of this amendment. This amendment is accompanied by a floppy disk containing SEQ ID NOS:1-17, in computer readable form, and a paper copy of the sequence information which has been printed from the floppy disk.

The information contained in the computer readable disk was prepared through the use of the software program "PatentIn" and is identical to that of the paper copy. This amendment contains no new matter.

Attached hereto is a marked-up version of the changes made to the Specification by the current Amendment. The attached pages are captioned **"VERSION WITH MARKINGS TO SHOW CHANGES MADE."**

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

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